



**PUBLICATIONS****DAVID H. PERSING, M.D., PH.D.****Books:**

Persing, D.H., T.F. Smith, T.J. White, and F. Tenover (eds). (1993) *Diagnostic Molecular Microbiology: Principles and Applications*, ASM Press, Washington, DC

Persing, D.H. (1996) *PCR Protocols for Emerging Infectious Diseases*, ASM Press, Washington, DC

**Book Chapters & Reviews:**

Persing, D.H., H.E. Varmus, and D. Ganem. (1985) Antibodies to preS and X determinants arise during natural infection with ground squirrel hepatitis virus. In *The Molecular Biology of Hepatitis Viruses*, Cold Spring Harbor Press.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Inhibition of secretion of hepatitis B surface antigen by a related presurface polypeptide. In *The Molecular Biology of Hepatitis Viruses*, Cold Spring Harbor Press.

White, T.J., R. Madej, and D.H. Persing. (1992) The polymerase chain reaction: clinical applications. In *Advances in Clinical Chemistry*, Academic Press, San Diego, CA, pp. 161-196.

Persing, D.H. (1992) Nucleic acid amplification techniques in the diagnosis of infectious diseases. In *Clinical Laboratory Medicine*, R. C. Tilton, ed., Mosby Year Book, pp. 572-581.

Campbell, S., P. Fiedler, and D.H. Persing. (1992) Nucleic acid amplification techniques in clinical diagnostics. In *Manual of Clinical Laboratory Immunology*, American Society for Microbiology, Washington, DC.

Persing, D.H., S.W. Barthold, and S.E. Malawista. (1992) Molecular detection of *Borrelia burgdorferi*. In *Lyme Disease: Molecular and Immunologic Approaches*, Cold Spring Harbor Laboratory Press, pp. 299-315.

Barthold, S.W., M. de Souza, E. Fikrig, and D.H. Persing. (1992) Lyme borreliosis in the laboratory mouse. In *Lyme Disease: Molecular and Immunologic Approaches*, Cold Spring Harbor Laboratory Press, pp. 223-242.

Podzorski, R.P., and D.H. Persing. (1995) Molecular detection and identification of microorganisms. In *Manual of Clinical Microbiology*, 6th edition, Murray PR, Baron EJ, Pfaller MA, Tenover FC, Tenover FC (eds.), pp. 130-157, ASM Press, Washington, DC.

Relman, D.A., and D.H. Persing. (1996) Genotypic methods for microbial identification. In *PCR Protocols for Emerging Infectious Diseases*, ASM Press, Washington, DC, pp. 3-31.

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Persing, D.H., D.A. Relman, and F.C. Tenover. (1996) Genotypic detection of antimicrobial resistance. In *PCR Protocols for Emerging Infectious Diseases*, ASM Press, Washington, DC, pp. 33-57.

Hofmeister, E.K., D.H. Persing, L. Mann, and G.L. Woods. (1996) Spirochete infections. In *Clinical Diagnosis and Management by Laboratory Methods*. Henry, J.B. (Ed.), 19th edition, W.B. Saunders, Philadelphia, PA.

Whelan, A.C., and Persing, D.H. (1996) The role of nucleic acid amplification and detection in the clinical laboratory. *Ann. Rev. Microbiol.* 50:349-73.

Persing, D.H. (1997) Babesiosis. In Pathology of Infectious Diseases, Volume I & II. Connor, D.H., F.W. Chandler, H.J. Manz, D.A. Schwartz, and E.E. Lack (Eds.), Appleton & Lange, Stamford, CT.

Zheng, X., and D.H. Persing. Genetic amplification techniques for the diagnosis of infectious disease. In *Rapid Methods*. Specter, S. (Ed.)

## Original Articles:

Persing, D.H., L. McGinty, C.W. Adams, and R.G. Fowler. (1981) Mutational specificity of the base analogue, 2-aminopurine, in *E. coli*. *Mutation Research* 83:25-37.

Caras, I.W., M.A. MacInnes, D.H. Persing, P. Coffino, and D.W. Martin. (1982) Mechanism of 2-aminopurine mutagenesis in mouse T-lymphosarcoma cells. *Mol. Cell. Biol.* 2:1096-1103.

Persing, D.H., H.E. Varmus, and D. Ganem. (1985) A frameshift mutation in the pre-S region of the human hepatitis B virus genome allows production of surface antigen particles but eliminates binding to polymerized albumin. *Proc. Natl. Acad. Sci. USA* 82:3440-3444.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Antibodies to preS and X determinants arise during natural infection with ground squirrel hepatitis virus. *J. Virol.* 60: 177-184.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) Inhibition of secretion of hepatitis B surface antigen by a related presurface polypeptide. *Science* 234:1388-1391.

Persing, D.H., H.E. Varmus, and D. Ganem. (1987) The *preS1* protein of hepatitis B virus is acylated at its N-terminus with myristic acid. *J. Virol.* 61:1672-1677.

Persing, D.H., and M.L. Landry. (1989) In vitro Amplification Techniques for the detection of Nucleic acids: New Tools for the Diagnostic Laboratory. Yale J. Biol. Med. 62:159-171.

Persing, D.H., S.R. Telford, A. Spielman, and S.W. Barthold. (1989) Detection of *Borrelia burgdorferi* infection in *Ixodes dammini* ticks using the polymerase chain reaction. J. Clin. Micro. 28:566-572.

Persing, D.H., S.R. Telford III, P.N. Rys, D.E. Dodge, T.J. White, S.E. Malawista, and A. Spielman. (1990) Detection of *Borrelia burgdorferi* DNA in museum specimens of *Ixodes dammini* ticks. *Science* 249:1420-1423.

Persing, D.H., S.R. Telford III, A. Spielman, and S.W. Barthold. (1990) Detection of *Borrelia burgdorferi* infection in *Ixodes dammini* ticks with the polymerase chain reaction. J. Clin. Microbiol. 28:566-572.

Barthold, S.W., D.H. Persing, A. Armstrong, and R.A. Peebles. (1991) Kinetics of *Borrelia burgdorferi* dissemination following intradermal inoculation of mice. *Am. J. Path.* 139:263-273.

**Persing, D. H. (1991) Polymerase chain reaction: Trenches to benches. J. Clin. Micro. 29:1281-1285.**

Malawista, S.E., R.T. Schoen, T.L. Moore, D.E. Dodge, T.J. White, and D.H. Persing. (1992) Failure of multitarget detection of *B. burgdorferi*-associated DNA sequences in synovial fluids of patients with juvenile rheumatoid arthritis: a cautionary note. *Arthr. & Rheum.* 35:246-247.

Persing, D.H., D. Mathiesen, W.F. Marshall, S.R. Telford III, A. Spielman, J.W. Thomford, and P.A. Conrad (1992) Detection of *Babesia microti* by polymerase chain reaction. J. Clin. Microbiol. 30:2097-2103.

Armstrong, A.L., S.W. Barthold, D.H. Persing, and D.S. Beck. (1992) Carditis in Lyme disease susceptible and resistant strains of laboratory mice infected with *Borrelia burgdorferi*. *Am. J. Trop. Med. Hyg.* 47(2):249-258.

Conrad, P.A., J. Thomford, A. Marsh, S.R. Telford III, J. Anderson, A. Spielman, E. A. Sabin, I. Yamane, and D.H. Persing. (1992) Ribosomal DNA probe for differentiation of *Babesia microti* and *B. gibsoni* isolates. *J. Clin. Microbiol.* 30:1210-1215.

Gustaferro, C.A., and D.H. Persing. (1992) Chemi-luminescent universal probe for bacterial ribotyping. *J. Clin. Microbiol.* 30:1039-1041.

Fikrig, E., S.W. Barthold, D.H. Persing, X. Sen, F.S. Kantor, and R.A. Flavell. (1992) *Borrelia burgdorferi* strain 25015: characterization of OspA and vaccination against infection. *J. Immunol.* 148:2256-2260.

Persing, D.H., and J. Rakela. (1992) Polymerase chain reaction for detection of hepatitis viruses: Panacea or purgatory? *Gastroenterology* 103:1098-1099.

Shapiro, E.D., M.A. Gerber, N.B. Holabird, A.T. Berg, H.M. Feder, Jr., G.L. Bell, P.N. Rys, and D.H. Persing. (1992) A controlled trial of antimicrobial prophylaxis for Lyme disease after deer-tick bites. *N. Engl. J. Med.* 327:1769-1773.

Persing, D.H. (1992) Diagnostic molecular microbiology: current challenges and future directions. *Diagn. Microbiol. Infect. Dis.* 16:159-163.

Meier, A., D.H. Persing, M. Finken, and E.C. Böttger. (1993) Elimination of contaminating DNA within PCR reagents-implications for a general approach to detect uncultured pathogens. J. Clin. Microbiol. 31:646-652.

Rys, P.N., and D.H. Persing. (1993) Preventing false positives: quantitative evaluation of three protocols for inactivation of polymerase chain reaction amplification products. *J. Clin. Microbiol.* 31:2356-2360.

Espey, M.J., T.F. Smith, and D.H. Persing. (1993) Dependence of polymerase chain reaction product inactivation protocols on amplicon length and sequence composition. *J. Clin. Microbiol.* 31:2361-2365.

- Podzorski, R.P., and D.H. Persing. (1993) PCR: The next decade. *Clin. Microbiol. Newslett.* 15:137-144.
- Quick, R.E., B.L. Herwaldt, J.W. Thomford, M.E. Garnett, M.L. Eberhard, M. Wilson, D.H. Spach, J.W. Dickerson, S.R. Telford III, K.R. Steingart, R. Pollock, D.H. Persing, J.M. Kobayashi, D.D. Juranek, and P.A. Conrad. (1993) Babesiosis in Washington State: a new species of *Babesia*. *Ann. Intern. Med.* 119:284-290.
- Barthold, S.W., M.S. de Souza, J.L. Janotka, A.L. Smith, and D.H. Persing. (1993) Chronic Lyme borreliosis in the laboratory mouse. *Am. J. Pathol.* 143:959-972.
- Laskus, T., J. Rakela, J.W. Mosley, M. Nowicki, and D.H. Persing. (1993) Prevalence and nucleotide sequence analysis of pre-core mutations among patients with fulminant hepatitis in the USA. *Gastroenterology* 105:1173-1178.
- Nocton, J.J., F. Dressler, B.J. Rutledge, P.N. Rys, D.H. Persing, and A.C. Steere. (1994) Detection of *Borrelia burgdorferi* DNA by polymerase chain reaction in synovial fluid in Lyme arthritis. *N. Engl. J. Med.* 330:229-234.
- Persing, D.H., B.J. Rutledge, P.N. Rys, D.S. Podzorski, K.D. Reed, P.D. Mitchell, B. Lin, and S.E. Malawista. (1994) Target imbalance: disparity of *Borrelia burgdorferi* genetic material in synovial fluid from Lyme arthritis patients. *J. Infect. Dis.* 169:664-668.
- Yang, L., J.H. Weis, E. Eichwald, C.P. Kolbert, D.H. Persing, and J.J. Weis. (1994) Heritable susceptibility to *Borrelia burgdorferi* induced arthritis is dominant and is associated with persistence of high numbers of spirochetes in tissues. *Infect. Immun.* 62:492-500.
- Thomford, J.W., P.A. Conrad, S.R. Telford, D. Mathiesen, B.H. Bowman, A. Spielman, M.J. Eberhard, B.L. Herwaldt, R.E. Quick, and D.H. Persing. (1994) Cultivation and phylogenetic characterization of a newly recognized human pathogenic protozoan. *J. Infect. Dis.* 169:1050-1056.
- Laskus, T., J. Rakela, and D.H. Persing. (1994) The stem-loop structure of the cis-encapsidation signal is highly conserved in naturally occurring hepatitis B virus variants. *Virology* 200:809-812.
- Laskus, T., J. Rakela, M.J. Tong, M. Nowicki, J.W. Mosley, and D.H. Persing. (1994) Naturally occurring hepatitis B virus mutants with deletions in the core promoter region. *J. Hepatol.* 20:837-841.
- Persing, D.H., D. Mathiesen, D. Podzorski, and S.W. Barthold. (1994) Genetic stability of *Borrelia burgdorferi* recovered from chronically infected laboratory mice. *Infect. Immun.* 62:3521-3527.
- Dicaudo, D.J., W.P.D. Su, W.F. Marshall, S.E. Malawista, S.W. Barthold, and D.H. Persing. (1994) *Acrodermatitis chronica atrophicans* in the United States: clinical and histopathologic features of six cases. *Cutis* 54:81-84.
- Geha, D.J., J.R. Uhl, C.A. Gustafiero, and D.H. Persing. (1994) Multiplex PCR for identification of methicillin-resistant staphylococci in the clinical laboratory. *J. Clin. Microbiol.* 32:1768-1772.
- Marshall, W.F. III, S.R. Telford III, P.N. Rys, B.J. Rutledge, D. Mathiesen, A. Spielman, and D.H. Persing. (1994) Detection of *Borrelia burgdorferi* DNA in museum specimens of *Peromyscus leucopus*. *J. Infect. Dis.* 170:1027-1032.

Malawista, S.E., S.W. Barthold, and D.H. Persing. (1994) Fate of *Borrelia burgdorferi* DNA in tissues of infected mice after antibiotic treatment. *J. Infect. Dis.* 170:1312-1316.

Laskus, T., J. Rakela, J.L. Steers, R.H. Wiesner, and D.H. Persing. (1994) Precore and contiguous regions of hepatitis B virus in liver transplantation for end-stage hepatitis B. *Gastroenterology* 107:1774-1780.

Hunt, J.M., G.D. Roberts, L. Stockman, T.A. Felmlee, and D.H. Persing. (1994) Detection of a genetic locus encoding resistance to rifampin in mycobacterial cultures and in clinical specimens. *Diagn. Microbiol. Infect. Dis.* 18:219-227.

Laskus, T., J. Rakela, M.J. Tong, and D. H. Persing. (1994) Nucleotide sequence analysis of the precore region in patients with spontaneous reactivation of chronic hepatitis B. *Dig. Dis. Sci.* 39:2000-2006.

Laskus, T., J. Rakela, R.H. Wiesner, J.L. Steers, and D.H. Persing. (1994) Lack of evidence for hepatitis B virus (HBV) infection in fulminant non-A, non-B hepatitis. *Dig. Dis. Sci.* 39:1677-1682.

Tenover, F.C., M.B. Huang, J.K. Rasheed, and D.H. Persing. (1994) Development of PCR assays to detect ampicillin resistance genes in cerebrospinal fluid samples containing *Haemophilus influenzae*. *J. Clin. Microbiol.* 32:2729-2937.

Laskus, T., J. Rakela, J.L. Steers, R.H. Wiesner, and D.H. Persing. (1994) Precore and contiguous regions of hepatitis B virus in liver transplantation for end-stage hepatitis B. *Gastroenterology* 107:1774-1780.

Reed, K.D., P.D. Mitchell, D.H. Persing, and C.P. Kolbert. (1995) Transmission of human granulocytic ehrlichiosis [letter]. *J. Amer. Med. Assoc.* 273:23.

Persing, D.H., B.L. Herwaldt, C. Glaser, R.S. Lane, J.W. Thornford, D. Mathiesen, P.J. Krause, D.F. Phillip, and P.A. Conrad. (1995) Infection with a *Babesia*-like organism in northern California. *N. Engl. J. Med.* 332:298-303.

Whelen, A.C., T.A. Felmlee, J.M. Hunt, D.L. Williams, G.D. Roberts, L. Stockman, and D.H. Persing. (1995) Direct genotypic detection of *Mycobacterium tuberculosis* rifampin resistance in clinical specimens by using single-tube hemi-nested PCR. *J. Clin. Microbiol.* 33:556-561.

Moore, S.B., J.R. Kruger, J. Rakela, E.C. Vamvakas, C. Schimek, J.J. Germer, and D.H. Persing. (1995) Blood donors who are repeatedly reactive for hepatitis C virus on enzyme immunoassay and positive on recombinant immunoblot assay: evidence of failure to identify some risk factors. *Transfusion* 35:308-312.

Weiss, J.B. Jr., and D.H. Persing. (1995) Hepatitis C: advances in diagnosis. *Mayo Clin. Proc.* 70:296-297.

Laskus, T., J. Rakela, and D.H. Persing. (1995) Nucleotide sequence analysis of precore and proximal core regions in patients with chronic hepatitis B treated with interferon. *Dig. Dis. Sci.* 40:1-7.

Zein, N.N., J. Rakela, and D.H. Persing. (1995) Genotype-dependent serologic reactivities in patients infected with hepatitis C virus in the United States. *Mayo Clin. Proc.* 70:449-452.

Gross, J.B. Jr., and D.H. Persing. (1995) Hepatitis C: advances in diagnosis and therapy. *Mayo Clin. Proc.* 70:296-297.

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Felmlee, T.A., Q. Liu, S.S. Sommer, A.C. Whelen, and D.H. Persing. (1995) Genotypic detection of *Mycobacterium tuberculosis* rifampin resistance: comparison of single strand conformation polymorphism and dideoxy fingerprinting. *J. Clin. Microbiol.* 33:1617-1623.

Whelen, A.C., T.A. Felmlee, J.M. Hunt, D.L. Williams, G.D. Roberts, L. Stockman, and D.H. Persing. (1995) Direct genotypic detection of *Mycobacterium tuberculosis* rifampin resistance in clinical specimens by using single-tube heminested PCR. *J. Clin. Microbiol.* 33:556-561.

Felmler, T.A., P.S. Mitchell, K.J. Ulfelder, D.H. Persing, and J.P. Landers. (1995) Capillary electrophoresis for the post-amplification detection of a hepatitis C virus-specific DNA product in human serum. *J. Cap. Elec.* 2:125-130.

**Zein, N.N., C.G.A. McGregor, N.K. Wendt, K. Schwab, P.S. Mitchell, and D.H. Persing, and J. Rakela. (1995) Hepatitis C infection in heart transplant recipients. J. Heart Lung Transpl. 14:865-869.**

Weinstein, J., J.J. Poterucha, D.H. Persing, N.N. Zein, and J. Rakela. (1995) Epidemiology and natural history of hepatitis C infections in liver transplant recipients. *J. Hepatol.* 22:154-159.

Kolbert, C.P., D.S. Podzorski, A.T. Wortman, A. Gazumyan, I. Schwartz, and D.H. Persing. (1995) Two geographically distinct isolates of *Borrelia burgdorferi* from the United States share a common unique ancestor. *Res. Microbiol.* 146:415-424.

Pancholi, P., C.P. Kolbert, P.D. Mitchell, K.D. Reed, J.S. Dumler, J.S. Bakken, S.R. Telford III, and D.H. Persing. (1995) *Ixodes dammini* as a potential vector of human granulocytic ehrlichiosis. *J. Infect. Dis.* 172:1007-1012.

Pruthi, R.K., W.F. Marshall, J.C. Wiltsie, and D.H. Persing. (1995) Human babesiosis. *Mayo Clin. Proc.* 70:853-862.

Laskus, T., J. Rakela, M.J. Nowicki, and D.H. Persing. (1995) Hepatitis B virus core promoter sequence analysis in fulminant and chronic hepatitis B. *Gastroenterology* 109:1618-1623.

Herwaldt, B.L., F.E. Springs, P.P. Roberts, M.L. Eberhard, K. Case, D.H. Persing, and W.A. Agger. (1995) Babesiosis in Wisconsin: a potentially fatal disease. *Am. J. Trop. Med. Hyg.* 53:146-151.

Podzorski, R.P., and D.H. Persing. (1995) Molecular methods for the detection and identification of infectious agents. *J. Histotechnol.* 18:225-232.

Kolbert, C.P., J.E. Connolly, M.J. Lee, and D.H. Persing. (1995) Detection of the staphylococcal *mecA* gene by chemiluminescent DNA hybridization. *J. Clin. Microbiol.* 33:2179-2182.

Tenover, F.C., R.D. Arbeit, R.V. Goering, P.A. Mickelsen, B.E. Murray, D.H. Persing, and B. Swaminathan. (1995) Interpreting chromosomal DNA restriction patterns produced by pulsed-field gel electrophoresis: criteria for bacterial strain typing. *J. Clin. Microbiol.* 33:2233-2239.

Fikrig, E., B. Liu, L.L. Fu, S. Das, R.A. Flavell, D.H. Persing, R.T. Schoen, S.W. Barthold, and S.E. Malawista. (1995) An *ospA* frameshift, identified from DNA in Lyme arthritis synovial fluid, results in an Osp that does not bind protective antibodies. *J. Immunol.* 155:5700-5704.

Barthold, S.W., E. Fikrig, L.K. Bockenstedt, and D.H. Persing. (1995) Circumvention of outer surface protein A immunity by host-adapted *Borrelia burgdorferi*. *Infect. & Immun.* 63:2255-2261.

Felmlee, T.A., D.H. Persing, and J.P. Landers. (1995) Capillary electrophoresis of DNA: application to clinical diagnoses. *J. Chromatog.* 717:127-137.

Zein, N.N., J. Rakela, J.J. Potcrucha, and D.H. Persing. (1995) Hepatitis C genotypes in liver transplant patients: distribution and 1-year follow-up. *Liver Transplant. Surg.* 1:354-357.

Anguita J., D.H. Persing, M. Rincón, S.W. Barthold, and E. Fikrig. (1996) Effect of anti-interleukin 12 treatment on murine Lyme borreliosis. *J. Clin. Invest.* 97:1028-1034.

Cockerill, F.R., D.E. Williams, K.D. Eisenach, B.C. Kline, L.K. Miller, L. Stockman, J. Voyles, G.M. Caron, S.K. Bundy, G.D. Roberts, W.R. Wilson, A.C. Whelen, J.M. Hunt, and D.H. Persing. (1996) Prospective evaluation of the utility of molecular techniques for diagnosing nosocomial transmission of multidrug-resistant tuberculosis. *Mayo Clin. Proc.* 71:221-229.

Telenti, A., and D.H. Persing. (1996) Novel strategies for the detection of drug resistance in *Mycobacterium tuberculosis*. *Res. Microbiol.* 147:73-79.

Herwaldt, B.L., D.H. Persing, E.A. Préçigout, W.L. Goff, D.A. Mathiesen, P.W. Taylor, M.L. Eberhard, and A.F. Gorenflot. (1996) A fatal case of babesiosis in Missouri: identification of another piroplasm that infects humans. *Ann. Intern. Med.* 124:643-650.

Walker, D.H., A. Barbour, J.H. Oliver, R.S. Lanc, J.S. Dumler, D.T. Dennis, D.H. Persing, A.F. Azad, and E.S. McSweeney. (1996) Emerging bacterial zoonotic and vector-borne diseases: ecological and epidemiological factors. *J. Amer. Med. Assoc.* 275:463-469.

Anderson, J.F., R.A. Flavell, L.A. Magnarelli, S.W. Barthold, F.S. Kantor, R. Wallich, D.H. Persing, D. Mathiesen, and E. Fikrig. (1996) Novel *Borrelia burgdorferi* isolates from *Ixodes scapularis* and *Ixodes dentatus* ticks feeding on humans. *J. Clin. Microbiol.* 34:524-529.

Persing, D.H., and P.A. Conrad. (1996) Babesiosis: new insights from phylogenetic analysis. *Infect. Agents & Dis.* 4:182-195.

Telford, S.R. III, J.E. Dawson, P. Katavolos, C.K. Warner, C.P. Kolbert, and D.H. Persing. (1996) Perpetuation of the agent of human granulocytic ehrlichiosis in a deer tick-rodent cycle. *Proc. Natl. Acad. Sci.* 93:6209-6214.

Krause, P.J., S. Telford III, A. Spielman, V. Sikand, R. Ryan, D. Christianson, G. Burke, P. Brassard, R. Pollack, J. Peck, and D.H. Persing. (1996) Concurrent Lyme disease and babesiosis: evidence for increased severity and duration of illness. *JAMA* 275:1657-1660.

Gewirtz, A.S., P.J. Cornbleet, D.J. Vugia, C. Traver, J. Niederhuber, C.P. Kolbert, and D.H. Persing. (1996) Human granulocytic ehrlichiosis: report of a case in northern California. *Clin. Infect. Dis.* 23:653-654.  
Original Articles, continued:

Zein, N.N., and D.H. Persing. (1996) Hepatitis C genotypes: current trends and future implications. *Mayo Clin. Proc.* 71:458-462.

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Whelen, A.C., and D.H. Persing. The role of nucleic acid amplification and detection in the clinical microbiology laboratory. *Microbiol. Rev.*, submitted.

Alonso, J., D.H. Persing, P. Anda, L.E. Gibson, B.J. Rutledge, and L. Iglesias. No evidence for *Borrelia burgdorferi* infection in lesions of morphea and lichen sclerosus et atrophicus in Spain: a prospective study and a review of the literature. Submitted.

Gordon, F.D., J.J. Poterucha, J. Germer, N.N. Zein, K.P. Batts, J.B. Gross Jr., R.H. Wicsner, and D.H. Persing. The relationship between hepatitis C genotype and the severity of recurrent hepatitis C after liver transplantation. Submitted.

**Zein, N.N., A.J. Czaja, D.H. Persing, P.J. Santrach, S.B. Moore. Viral and genetic factors as determinants of autoimmune expression in chronic hepatitis C. Submitted.**

**Belongia, E.A., K.D. Reed, P.D. Mitchell, C.P. Kolbert, D.H. Persing, J.S. Gill, J.J. Kazmierczak. Prevalence of granulocytic Ehrlichia infection among white-tailed deer in Wisconsin. In press.**

Duffy, J., C.P. Kolbert, B. Rutledge, and D.H. Persing. Active coinfection with *B. burgdorferi* and the agent of granulocytic ehrlichiosis. *The Lancet*, in press.

Krause, P.J., S. Telford III, A. Spielman, V.J. Sikand, D. Christianson, P. Brassard, J. Magera, T. Maruccha, M. Carter, G. Burke, T.V. Rajan, and D.H. Persing. Molecular monitoring of *Babesia microti* parasitemia: evidence of chronic infections in humans. In preparation.

Hofmeister, E.K., J.E. Childs, and D.H. Persing. Clonal selection for population members may contribute to the maintenance of *Borrelia burgdorferi* in naturally infected *Peromyscus leucopus*. In preparation.

Gordon, F.D., N.N. Zein, J.J. Poterucha, R.H. Wiesner, J.B. Gross, and D.H. Persing. Increased risk of histologic recurrence following liver transplantation in patients infected with HCV genotype 1b. Submitted.

Kang, I., S.W. Barthold, D.H. Persing, and L.K. Bockenstedt. T helper cell cytokines in early murine Lyme borreliosis: evidence for coordination of Th1 and Th2 responses in disease resistance. Submitted.

Daoud, M.S., J.B. Gross Jr., R.D. Ellefson, D.H. Persing, and W.P.D. Su. Prevalence of chronic hepatitis C infection in patients with porphyria cutanea tarda in the United States. Submitted.

Guerrero, R.B., K.P. Batts, D.J. Brandhagen, J.J. Germer, R.G. Perez, and D.H. Persing. Effects of formalin fixation and prolonged block storage on detection of hepatitis C virus RNA in liver tissue. *Diagn. Mol. Pathol.*, Submitted.

Guerrero, R.B., K.P. Batts, J.J. Germcr, and D.H. Persing. Reverse transcriptase-polymerase chain reaction fails to detect peripheral blood hepatitis C RNA in formalin-fixed liver tissue. *Diagn. Mol. Pathol.*, Submitted.

Hofmeister, E.K., C.P. Kolbert, A.S. Abdulkarim, J.M. Magera, M.K. Hopkins, J.R. Uhl, A. Ambyaye, S.R. Telford III, F.R. Cockerill III, and D.H. Persing. Cosegregation of a novel *Bartonella* sp. with *Borrelia burgdorferi* and *Babesia microti* in *Peromyscus leucopus*. Submitted.

Czaja, A.J., A.S. Abdulkarim, H.A. Carpenter, R.G. Perez, D.H. Persing, and N.N. Zein. Hepatitis G virus infection in type 1 autoimmune hepatitis. Submitted.

Jahangir, A., C. Kolbert, W. Edwards, P. Mitchell, J.F. Hall, J.S. Dumler, and D.H. Persing. Fatal pancarditis associated with granulocytic ehrlichiosis in a 44-year-old man. *N. Engl. J. Med.*, submitted.

## Abstracts:

Persing, D.H., L. McGinty, and R.G. Fowler. (1980) Mutational specificity of the base analogue, 2-amino-purine, in *Escherichia coli* (Abstract) *Genetics*, 94, s82.

Persing, D.H., H.E. Varmus, and D. Ganem. (1986) A mutation in the pre-S region of HBV abolishes albumin binding activity of hepatitis B surface antigen polypeptides in Viral Hepatitis, UC San Francisco symposium on viral hepatitis and liver disease.

**Persing, D.H., and Edberg, S.C. (1989) Identification and characterization of *Chlamydia trachomatis* in clinical specimens using the polymerase chain reaction. Annual Meeting, the American Society for Microbiology, New Orleans, LA.**

Schillinger, J., P. Rys, and D.H. Persing. (1990) Detection and characterization of HPV infection: comparison of dot-blotting and PCR. Annual Meeting, the American Society for Microbiology, Anaheim, CA.

Shapiro, E., M. Gerber, D. Persing, S. Luger, and H. Feder. (1990) Risk of developing Lyme disease after a deer tick bite in an endemic area. Abstracts, International Conference on Antimicrobial Agents and Chemotherapy, New Orleans, LA.

Marshall, W.F., D.J. Dicaudo, P.N. Rys, W.P.D. Su, and D. H. Persing. (1991) The antiquity of Lyme disease: demonstration of *Borrelia burgdorferi* DNA in archived human tissues. 31st Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, IL.

Mathiesen, D., S.R. Telford, III, A. Spielman, W.F. Marshall, P.A. Conrad and D.H. Persing. (1991)  
Detection of *Babesia microti* in parasitemic human blood using the polymerase chain reaction. 5th San Diego  
Conference on Nucleic Acids, San Diego, CA.

Gustaferro, C., and D.H. Persing. (1991) A chemiluminescent universal probe for bacterial ribotyping. 5th San Diego Conference on Nucleic Acids, San Diego, CA.

Rys, P.N., and D.H. Persing. (1991) Evaluation of photochemical and enzymatic methods for amplicon sterilization. 5th San Diego Conference on Nucleic Acids, San Diego, CA.

Podzorski, D.S., D. Mathiesen, J. Proper, and D.H. Persing. (1991) DNA sequence divergence within the *OspA* genes of two North American isolates of the Lyme disease spirochete, *Borrelia burgdorferi*. 5th San Diego Conference on Nucleic Acids, San Diego, CA.

Hopkins, M.K., P.K.W. Yu, D.H. Persing, and J.P. Anhalt. (1991) Simplified scheme for screening of *Escherichia coli* O157:H7 from Stool Cultures. 91st General Meeting of the American Society for Microbiology, Dallas, Texas.

Gutschenritter, J., P. Schams, C. O'Hara, and D.H. Persing. (1992) Comparison of the Biolog and MIDI systems for identification of Gram-negative nonfermenters. 92nd General Meeting of the American Society for Microbiology, Dallas, Texas.

Piper, K., M.E. Brecher, L. Bland, and D.H. Persing. (1992) Use of a chemiluminescent universal bacterial probe for pre-transfusion screening of blood products. 92nd General Meeting of the American Society for Microbiology, Dallas, Texas.

Uhl, J.R., L. Stockman, N.K. Henry, C.A. Gustafiero, J.E. Rosenblatt, B.C. Kline, and D.H. Persing. (1992) Comparison of pulsed-field gel electrophoresis chemi-luminescent ribotyping and fatty acid analysis for typing *Xanthomonas maltophilia*. 92nd General Meeting of the American Society for Microbiology, Dallas, Texas.

Thomford, J.W., P.A. Conrad, S.R. Telford III, R. Quick, B. Herwaldt, M. Eberhard, D. Mathieson, and D. Persing. (1992) A new human *Babesia* in the Western United States. International Conference of Diseases in Nature Communicable to Man, Vancouver, British Columbia.

Douglas, D.D., J. Rakela, H.F. Taswell, D.H. Persing, J. Wilber, R. Sanchez-Pescador, P. Neuwald, and M.S. Urdea. (1992) Correlation of quantitative HCV RNA, anti-HCV IgM, and Serum ALT with histologic presentation. American Association for the Study of Liver Diseases, Chicago, Illinois.

Weinstein, J.S., J. Rakela, D.D. Douglas, D.H. Persing, F.B. Hollinger, H.J. Lin, J.C. Wilber, C.S. Chan, P. Neuwald, and M.S. Urdea. (1992) Comparison of a quantitative HCV-RNA assay to PCR in monitoring the effect of alpha-interferon in patients with chronic hepatitis C. American Association for the Study of Liver Diseases, Chicago, Illinois.

Persing, D.H., W.F. Marshall, S.R. Telford, P.N. Rys, and A. Spielman. (1992) Detection of *Borrelia burgdorferi* DNA in museum specimens of *Peromyscus leucopus*. International Conference on Lyme Borreliosis. Arlington, VA.

Krause, P.J., N. Olson, D. Hild, S. Telford, J. Magera, and D.H. Persing. (1993) Identification of *Babesia microti* in the bone marrow of a renal transplant patient. Infectious Diseases Society of America, Washington, DC.

Tenover, F.C., M.B. Huang, J.K. Rasheed, and D.H. Persing. (1993) Direct detection of ampicillin-resistant *Haemophilus influenzae* (HI) in cerebrospinal fluid (CSF) by using polymerase chain reaction (PCR). 33rd ICAAC, New Orleans, Louisiana.

Geha, D., and D.H. Persing. (1993) Enzymatic detection of polymerase chain reaction products (ED-PCR) compared to multiplex PCR (MP-PCR) for detection of *MecA* in *Staphylococci*. 33rd ICAAC, New Orleans, Louisiana.

Thomford, J.A., P. Conrad, C. Glaser, B. Lane, S. Telford III, D. Mathiesen, B. Bowman, A. Spielman, M. Eberhard, B. Herwaldt, R. Quick, and D.H. Persing. (1993) A newly identified human pathogen is related to the oncogenic parasite *Theileria*. 33rd ICAAC, New Orleans, Louisiana.

Krause, P., V.J. Sikand, L. Bow, D. Christianson, M. Cartter, J. Magera, and D.H. Persing. (1993) PCR diagnosis of *Babesia microti* infection in humans. 33rd ICAAC, New Orleans, Louisiana.

Espy, M.J., T.F. Smith, and D.H. Persing. (1993) Effect of amplicon size and nucleotide composition on inactivation by isopsoralen (IP) and uracil-N-glycosylase (UNG) after amplification by polymerase chain reaction (PCR). 93rd ASM General Meeting, Atlanta, Georgia.

Rys, P., and D.H. Persing. (1993) Avoiding false positives with PCR: comparison of three methods for inactivation of amplified DNA. 93rd ASM General Meeting, Atlanta, Georgia.

Hunt, D.J., A. Telenti, G. D. Roberts, L. Stockman, T.A. Felmlee, and D.H. Persing. (1993) Detection of a genetic locus encoding resistance to rifampin in mycobacterial cultures and in clinical specimens. 93rd ASM General Meeting, Atlanta, Georgia.

Geha, D., J. Uhl, and D.H. Persing. (1993) Multiplex PCR for identification of methicillin-resistant *Staphylococci* in the clinical laboratory. 93rd ASM General Meeting, Atlanta, Georgia.

Abstracts, continued:

Persing, D.H., and D. Podzorski. (1993) Genetic transformation of the Lyme disease spirochete. 93rd ASM General Meeting, Atlanta, Georgia.

Kolbert, C., D. Podzorski, D. Mathiesen, and D.H. Persing. (1993) Molecular analysis of strain variation among *Borrelia burgdorferi* isolates from the United States. 93rd ASM General Meeting, Atlanta, Georgia.

Zein, N.N., J. Rakela, J. Poterucha, R.H. Wiesner, R.A. F. Krom, and D.H. Persing. (1993) HCV genotypes in liver transplant patients. American Gastroenterological Association, New Orleans, Louisiana.

Zein, N. N., J. Rakela, E.L. Krawitt, R. Reddy, V. Idrovo, L. Jeffers, E. Schiff, A.A. Gossard, J.B. Gross, J. Poterucha, and D.H. Persing. (1993) Distribution of HCV genotypes in patients with chronic hepatitis C infection in USA. American Gastroenterological Association, New Orleans, Louisiana.

Laskus, T., J. Rakela, J.W. Mosley, M. Nowicki, and D.H. Persing. (1993) Prevalence and nucleotide sequence analysis of pre-core mutations among patients with fulminant hepatitis in the USA. International Symposium on Viral Hepatitis and Liver Disease, Tokyo, Japan.

Laskus, T., D.H. Persing, J.S. Weinstein, S. Kuwada, R.H. Wiesner, J.L. Steers, and J. Rakela. (1993) Absence of HBV DNA in patients with fulminant NANB hepatitis. AASLD, Chicago, Illinois.

Laskus, T., J. Rakela, J.S. Weinstein, M.J. Tong, and D.H. Persing. (1993) Nucleotide sequence analysis of the precore region in patients with spontaneous reactivation of chronic hepatitis. AASLD, Chicago, Illinois.

Laskus, T., J. Rakela, J.S. Weinstein, M.J. Tong, M. Nowicki, J.W. Mosley, and D.H. Persing. (1993) Core promoter deletions naturally occurring hepatitis B virus (HBV) variants. AASLD, Chicago, Illinois.

Laskus, T., J. Rakela, and D.H. Persing. (1993) The stem-loop structure of the cis-encapsidation signal is highly conserved in naturally occurring hepatitis B virus (HBV) variants. American Gastroenterological Association and AASLD, New Orleans, Louisiana.

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Laskus, T., J. Rakela, J.L. Steers, R.H. Wiesner, and D.H. Persing. (1993) Molecular characterization of the precore, core promoter, and proximal core regions of hepatitis B virus (HBV) in patients undergoing orthotopic liver transplantation. American Gastroenterological Association, New Orleans, Louisiana.

Oliver, J., T. Kollars, F. Chandler, E. Masters, R. Lane, D.H. Persing, and P. Duray. (1994) Unusual tick isolates of *Borrelia burgdorferi* from Southeast Missouri associated geographically and temporally with human Lyme disease. VI International Conference on Lyme Borreliosis, Bologna, Italy.

Whelen, A.C., J. Hunt, T. Felmlee, D. Williams, G. Roberts, L. Stockman, and D.H. Persing. (1994) Rapid and specific PCR-based detection of drug-resistant and sensitive *Mycobacterium tuberculosis* American Society for Microbiology, Las Vegas, Nevada.

Schutzer, S.E., and D.H. Persing. (1994) Surrogate markers of active infection in vaccine trials. CSH Vaccine Meeting, Banbury Conference on Vaccine Development, Cold Spring Harbor, New York.

Abstracts, continued:

Zein, N.N., C.G.A. McGregor, K. Schwab, N.K. Wendt, P.S. Mitchell, D.H. Persing, and J. Rakela. (1994) Prevalence of hepatitis C infection among heart transplant recipients. American Association for the Study of Liver Diseases, Chicago, Illinois.

Zein, N.N., J. Rakela, E.L. Krawitt, J. Poterucha, J.B. Gross, Jr., A.A. Gossard, and D.H. Persing. (1994) Response to interferon in patients with different HCV genotypes in U.S.A. American Association for the Study of Liver Diseases, Chicago, Illinois.

Nocton, J.J., B. Bloom, B.J. Rutledge, P.N. Rys, D.H. Persing, and A.C. Steere. (1994) Detection of *Borrelia burgdorferi* DNA by polymerase chain reaction in cerebrospinal fluid in patients with neurologic involvement in Lyme disease. 58th Annual Scientific Meeting of the American College of Rheumatology, Minneapolis, Minnesota.

Zein, N.N., C.G.A. McGregor, K. Schwab, P.S. Mitchell, N.K. Wendt, D.H. Persing, and J. Rakela. (1995) Prevalence and outcome of hepatitis C infection among heart transplant recipients. International Society for Heart and Lung Transplantation, San Francisco, California.

Felmlee, T.A., D.H. Persing, and J.P. Landers. (1995) Capillary electrophoretic determination of single point mutations in DNA: potential clinical applications.

Dumler, J.S., J.S. Bakken, P.D. Mitchell, C.P. Kolbert, P. Pancholi, and D.H. Persing. (1995) Human granulocytic ehrlichiosis (HGE), Lyme disease, and babesiosis in the Upper Midwest: evidence for concurrent infections. 35th ICAAC, San Francisco, CA.

Kolbert, C.P., P. Pancholi, P. Mitchell, K. Reed, J.S. Dumler, J. Bakken, and D.H. Persing. (1995) Evidence for human granulocytic ehrlichiosis in patients with suspected Lyme disease. American Society for Microbiology, Washington, DC.

Krause, P., S. Telford III, A. Spielman, V.J. Sikand, R. Ryan, D. Christianson, P. Brassard, R. Pollack, G. Burke, and D.H. Persing. (1995) Increased severity of Lyme disease illness due to concurrent babesiosis. 35th ICAAC, San Francisco, CA.

Gross, J., N. Zein, J. Germer, J. Poterucha, A. Gossard, N. Wendt, P. Mitchell, N. Ramzan, and D.H. Persing. (1995) Changes in predominant hepatitis C genotype during alpha-interferon therapy. EASL Meeting.

Zein, N., J. Gross, A. Gossard, R. Wiesner, J. Poterucha, and D.H. Persing. (1995) Significance of hepatitis C virus (HCV) RNA levels in orthotopic liver transplant recipients (OLT). EASL Meeting.

Schimck, C.M., N.N. Zein, N.K. Wendt, P.S. Mitchell, J.J. Germer, J.N. Thorvilson, and D.H. Persing. (1995) Correlation between strong RIBA 2.0 c22-3 indeterminate results and HCV viremia in HCV EIA reactive subjects. American Association of Blood Banks, 48th Annual Meeting, New Orleans, LA.

Zein, N., J. Gross, A. Gossard, R. Wiesner, J. Poterucha, and D.H. Persing. (1995) Significance of hepatitis C virus (HCV) RNA levels in orthotopic liver transplant (OLT) recipients. Joint Congress on Liver Transplantation, London, England.

Smith, C.I., K.D. Lake, J.A. Haroldson, D.H. Persing, R.W. Emery, and M.R. Pritzker. (1995) Clinical experience with hepatitis C (HCV) infection in a cardiac transplant center. American Association for the Study of Liver Diseases, Chicago, IL.

Krause, P.J., S.R. Telford III, A. Spielman, V.J. Sikand, R. Ryan, D. Christianson, P. Brassard, R. Pollack, G. Burke, and D.H. Persing. (1995) 535 increased severity of Lyme disease illness due to concurrent babesiosis. American Society of Tropical Medicine and Hygiene.

Gupta, P., R.W. Hurley, D.H. Persing, and D.E. Hammerschmidt. (1995) Acute relapsing Babesia microti infection in an immunocompromised host: important lessons for the hematologist. American Society of Hematology, Seattle, WA.

Persing, D.H. (1995) Molecular diagnostic methods and infectious diseases: today and tomorrow. 33rd Annual IDSA Meeting, San Francisco, CA.

Oda, R.P., J.J. Germer, D.H. Persing, and J.P. Landers. (1996) Capillary electrophoresis in polymer networks with laser-induced fluorescence detection as a rapid diagnostic test for tick-transmitted diseases. 8th International Symposium on High Performance Capillary Electrophoresis, Orlando, FL.

Zein, N.N., D.H. Persing, and A.J. Czaja. (1996) Viral and genetic factors as determinants of autoimmune expression in chronic hepatitis C. American Gastroenterological Association and American Association for the Study of Liver Diseases, Chicago, IL.

Brandhagen, D.J., J.J. Poterucha, J.B. Gross Jr., W.R. Kim, R.G. Perez, J.J. Germer, A.A. Gossard, J. Detmer, J. Kolberg, M. Collins, and D.H. Persing. (1996) Hepatitis G infection in patients undergoing interferon treatment for chronic hepatitis C: clinical characteristics and HGV RNA levels. American Association for the Study of Liver Diseases, Chicago, IL.

Brandhagen, D.J., J.B. Gross Jr., K.P. Batts, F.D. Gordon, R.H. Wiesner, A.A. Gossard, D.H. Persing, and J.J. Poterucha. (1996) Recurrence of hepatitis C after transplant: significance of HLA match and HCV genotype. American Association for the Study of Liver Diseases, Chicago, IL.

Brandhagen, D.J., J.B. Gross Jr., J.J. Poterucha, W.R. Kim, M.R. Charlton, R.G. Perez, J.J. Germer, J. Detmer, J. Kolberg, M. Collins, R.H. Wiesner, and D.H. Persing. (1996) Hepatitis G infection as determined by bDNA in patients with hepatitis C undergoing liver transplantation: clinical characteristics and viral levels. American Association for the Study of Liver Diseases, Chicago, IL.

